

# REPORT DOCUMENTATION PAGE

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(2)

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MEMORANDUM FOR PRS (Contractor/In-House Publication)

FROM: PROI (TI) (STINFO)

16 June 1999

SUBJECT: Authorization for Release of Technical Information, Control Number: AFRL-PR-ED-TP-FY99-0135  
C.T. Liu, "Predicting Crack Growth in a Filled Polymeric Material"

1999 ASME Summer Conference      Presentation      (Public Release)

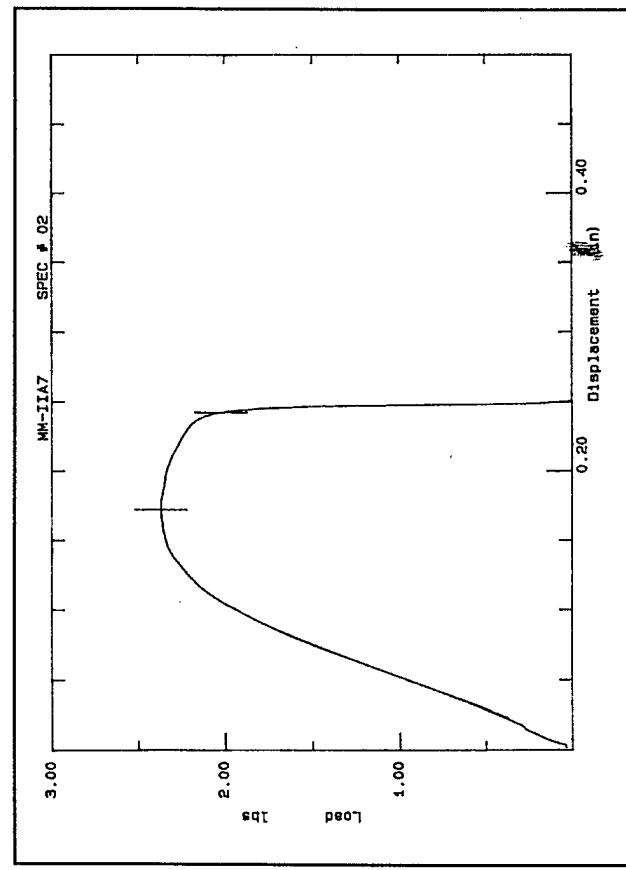
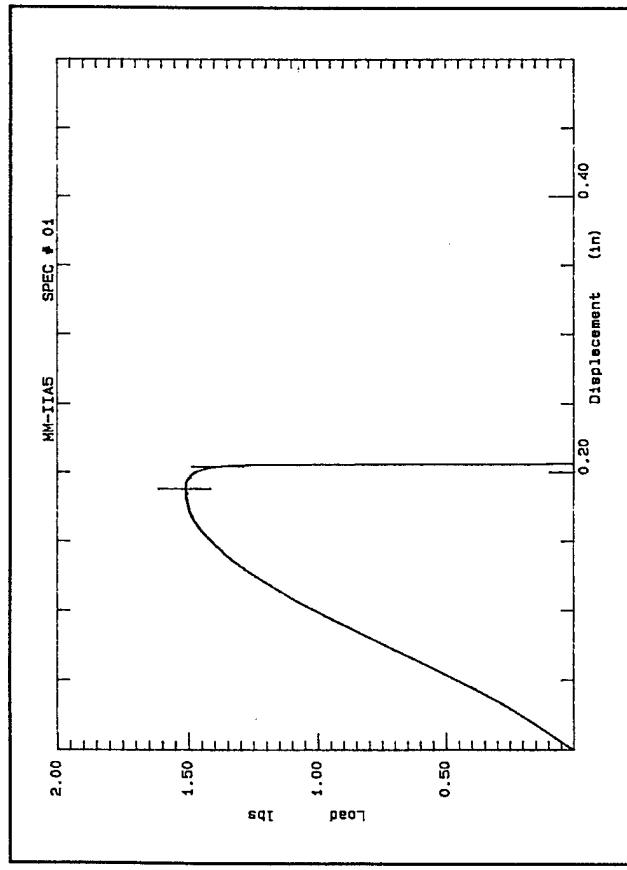
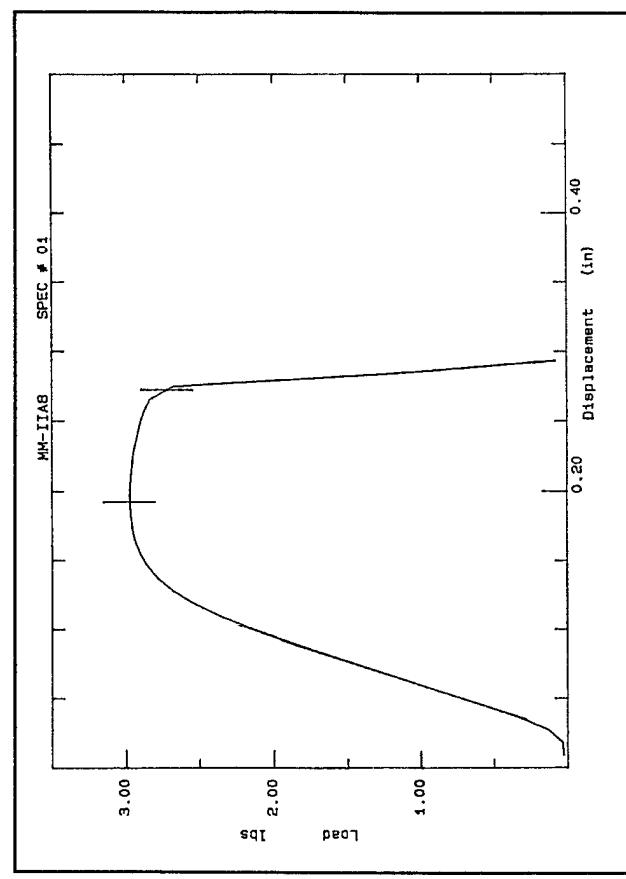
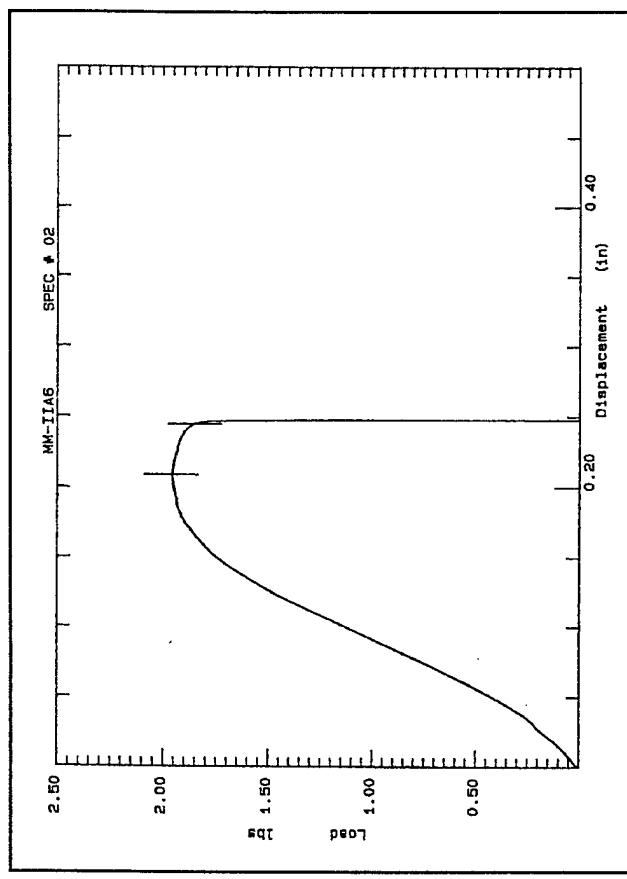
# **Predicting Crack Growth behavior in a Filled Polymeric Material**

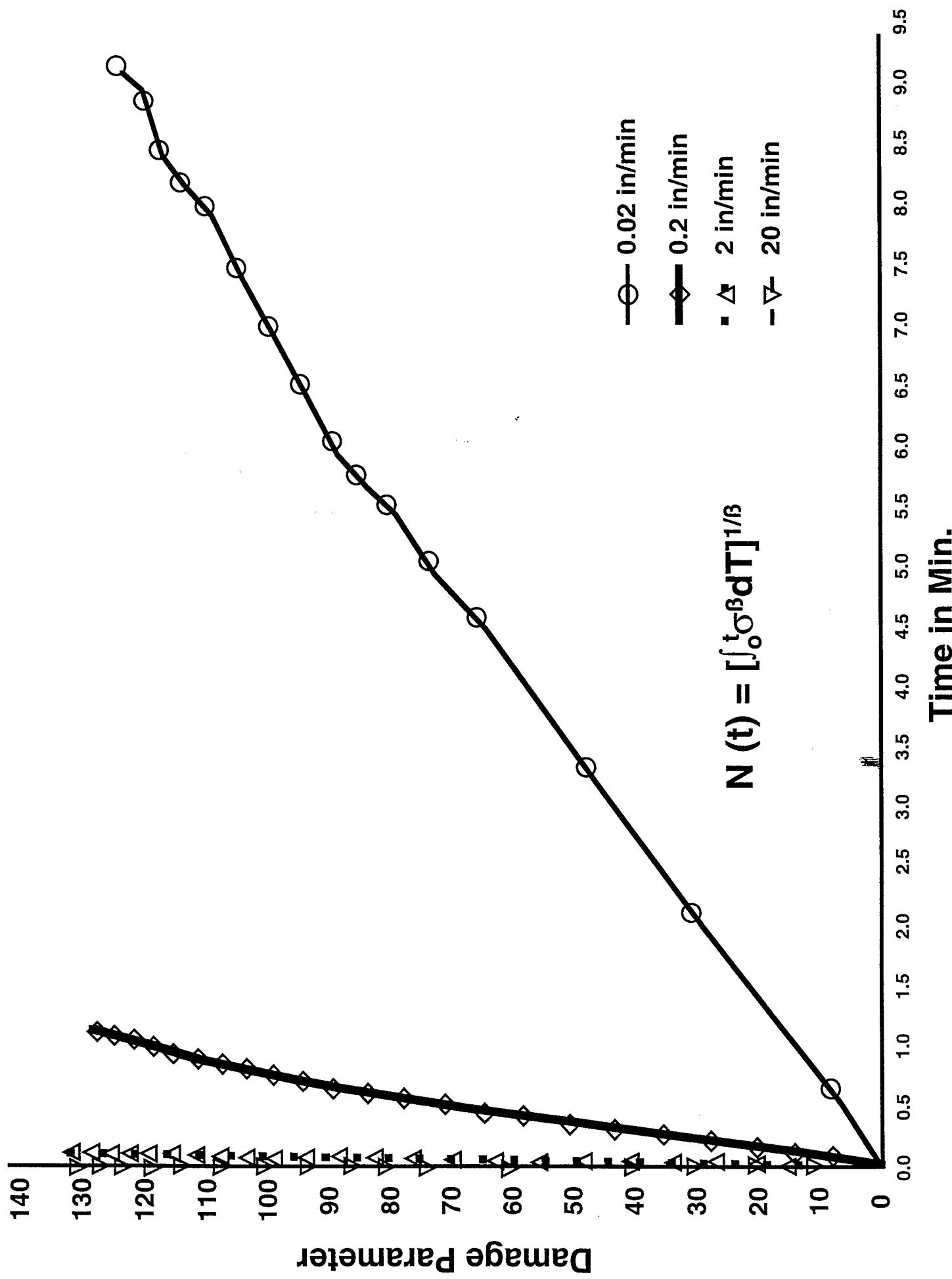
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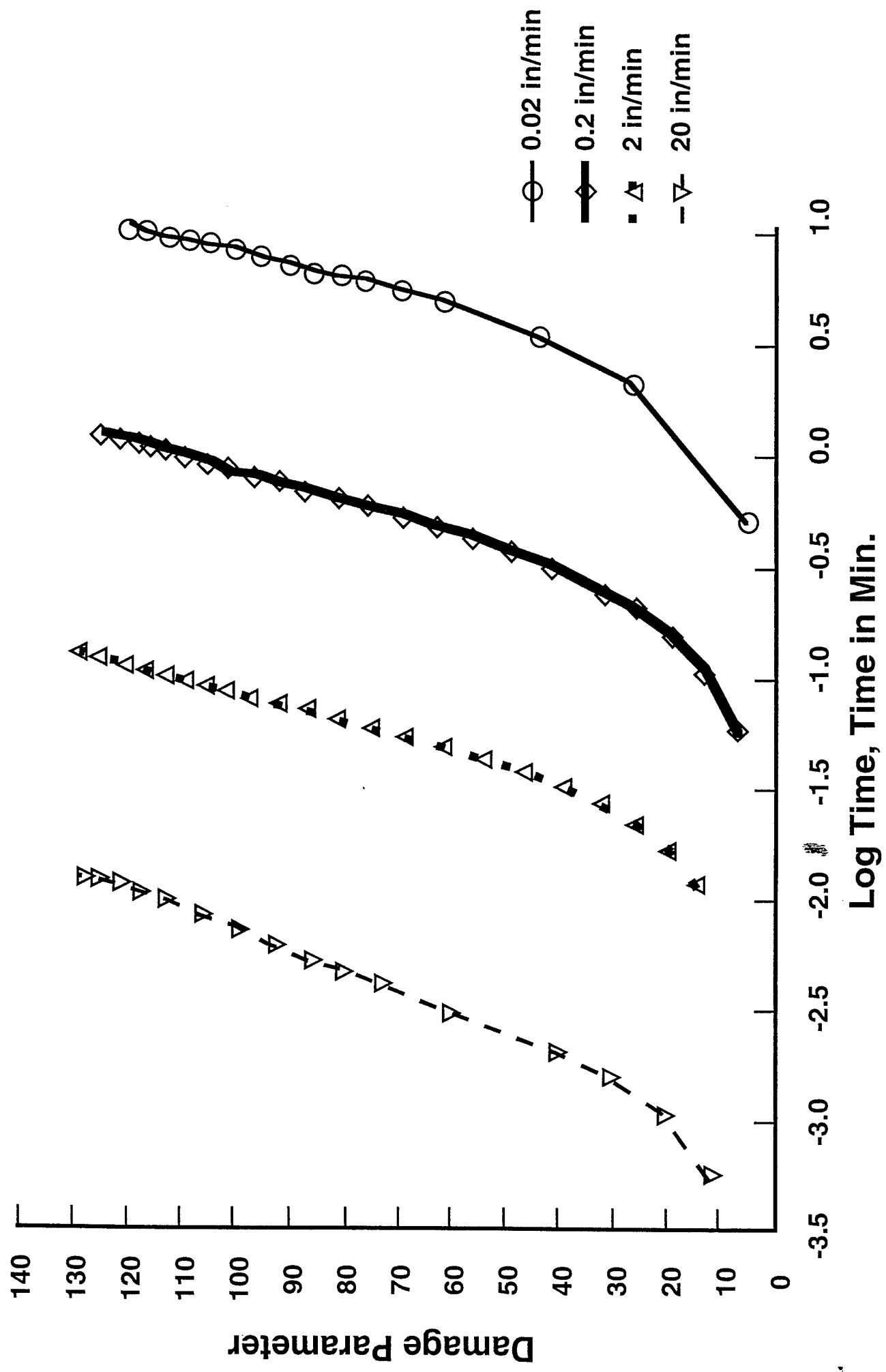
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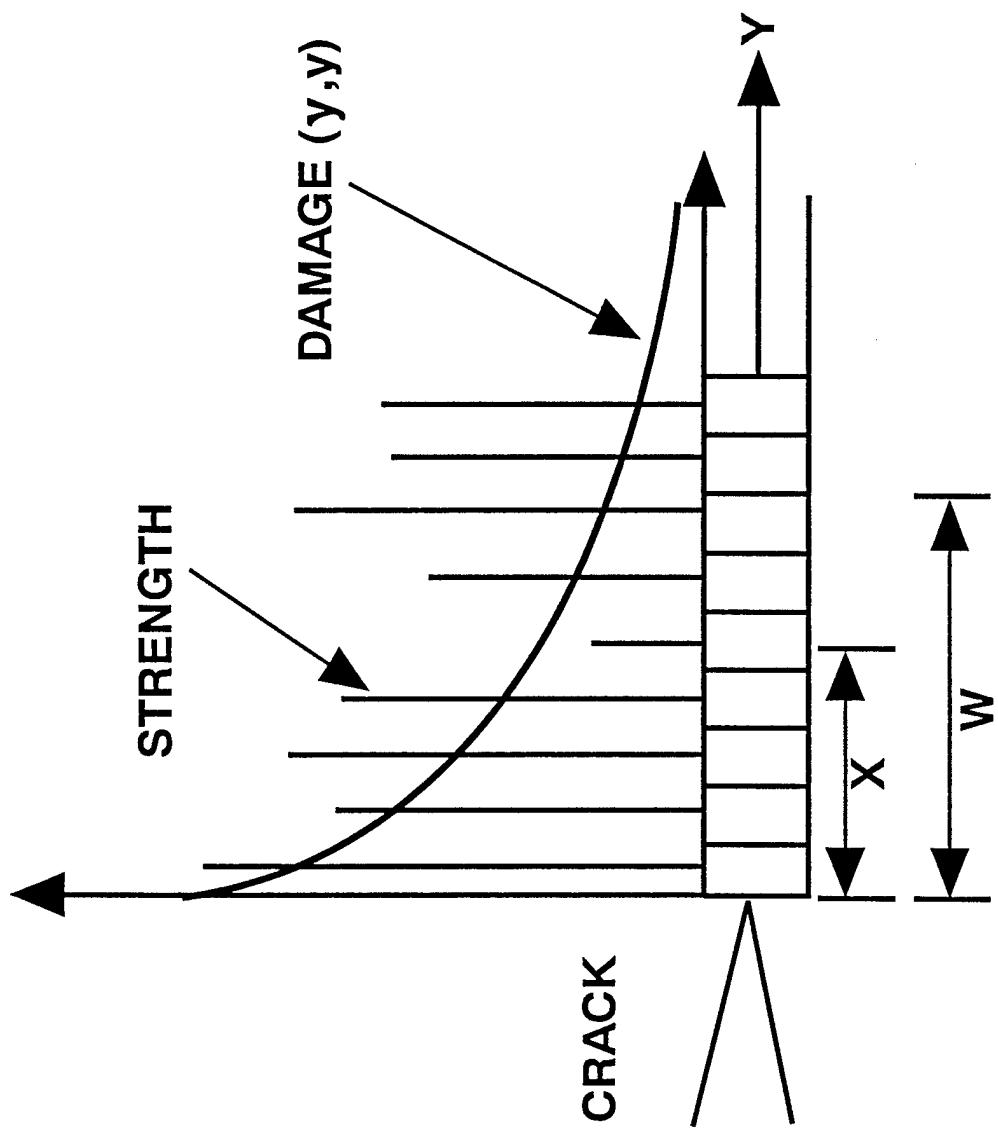
## **Objectives**

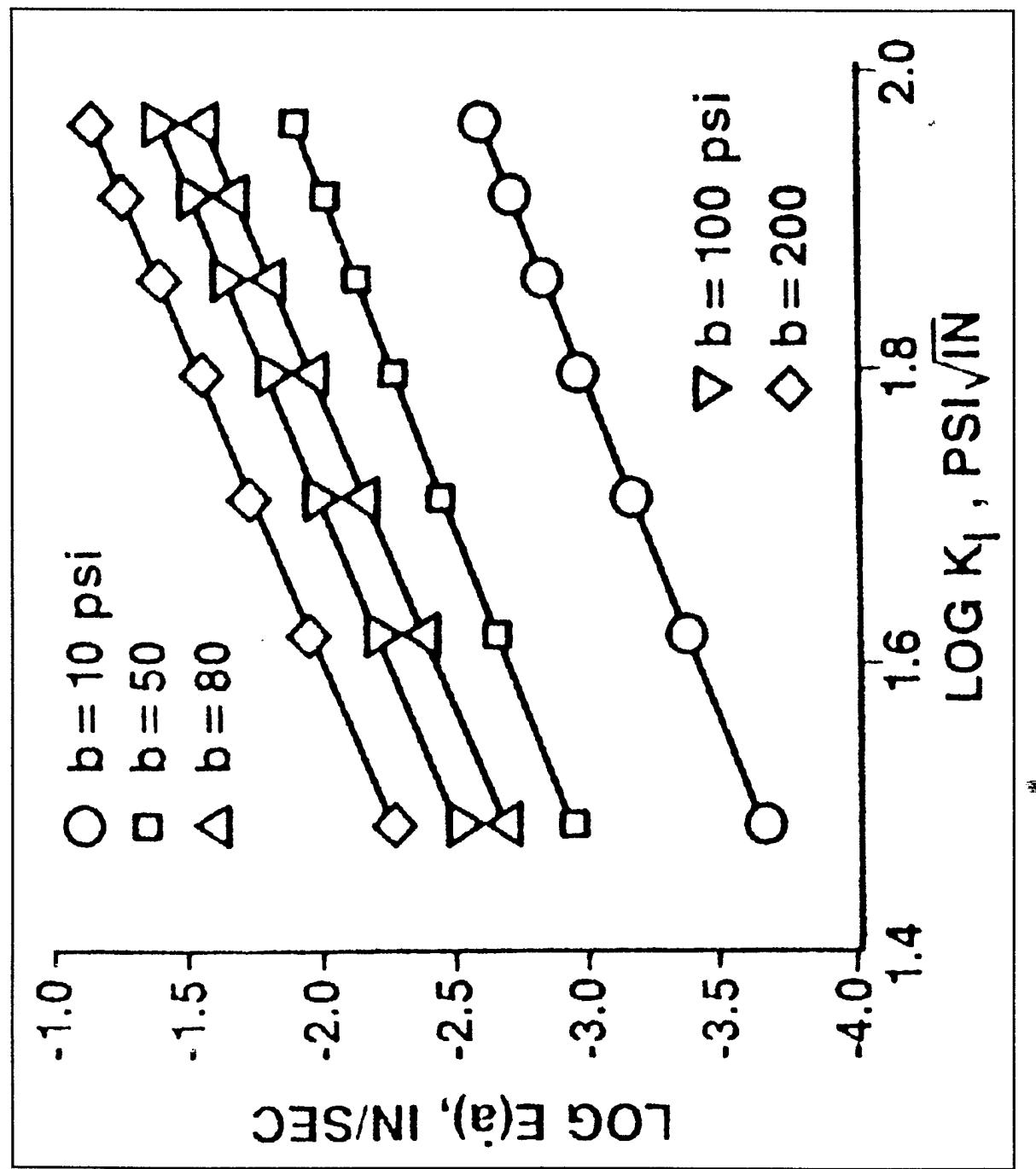
- Predict the Crack growth Behavior at different Strain Rates.**
- Investigate the Sensitivity of the Crack Growth Rate to the Variation of the Parameters in the Crack Growth Model.**

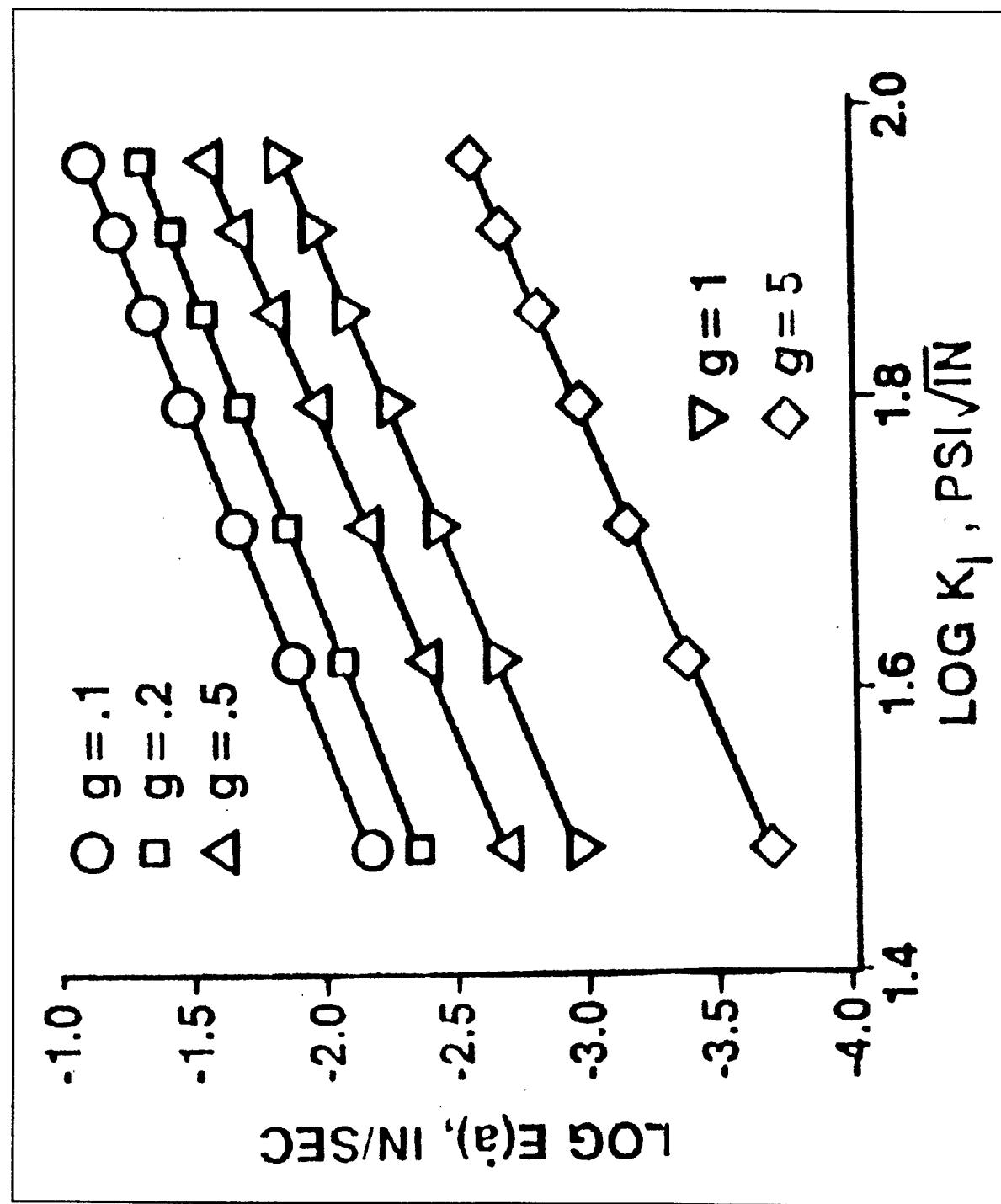


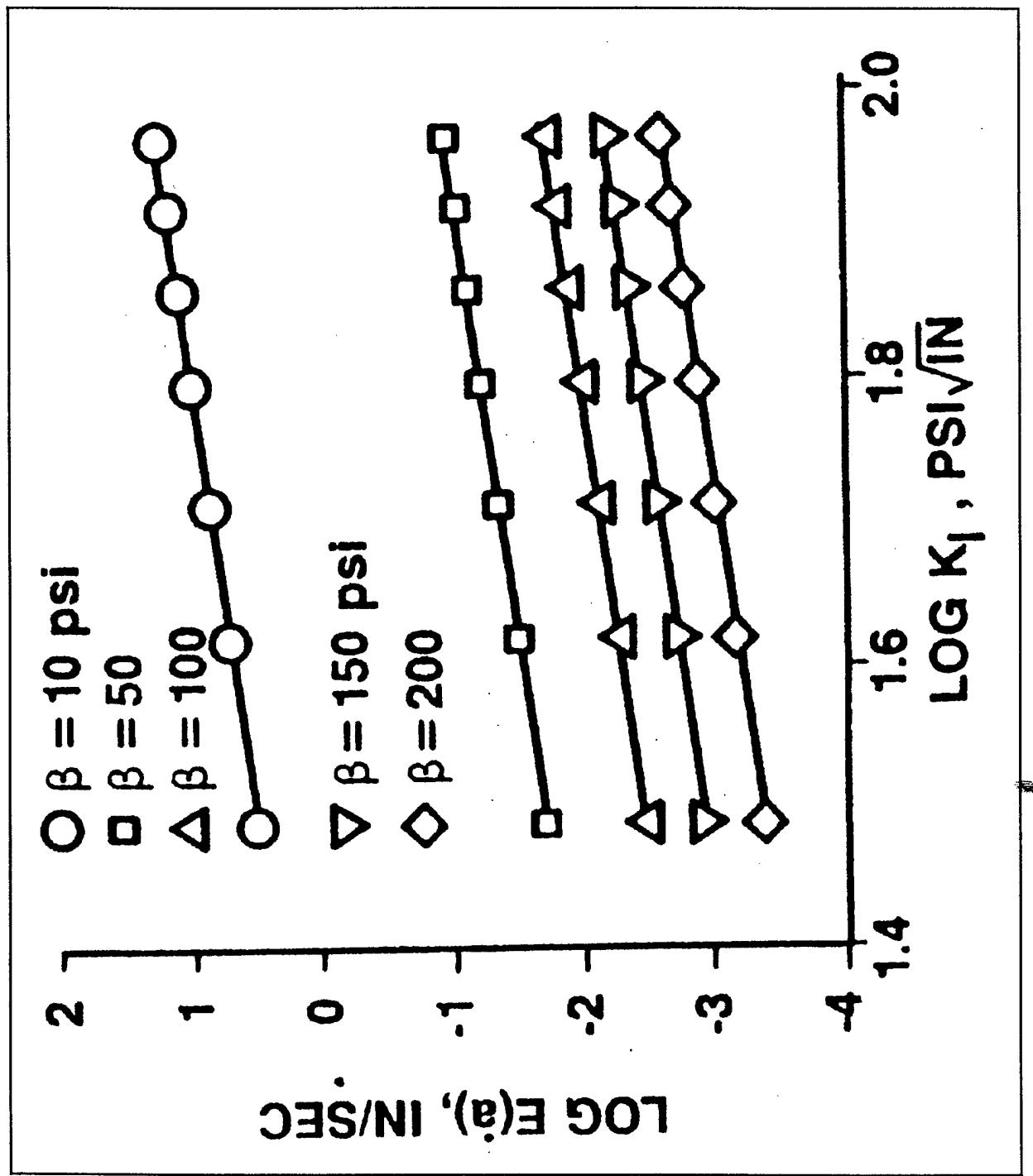


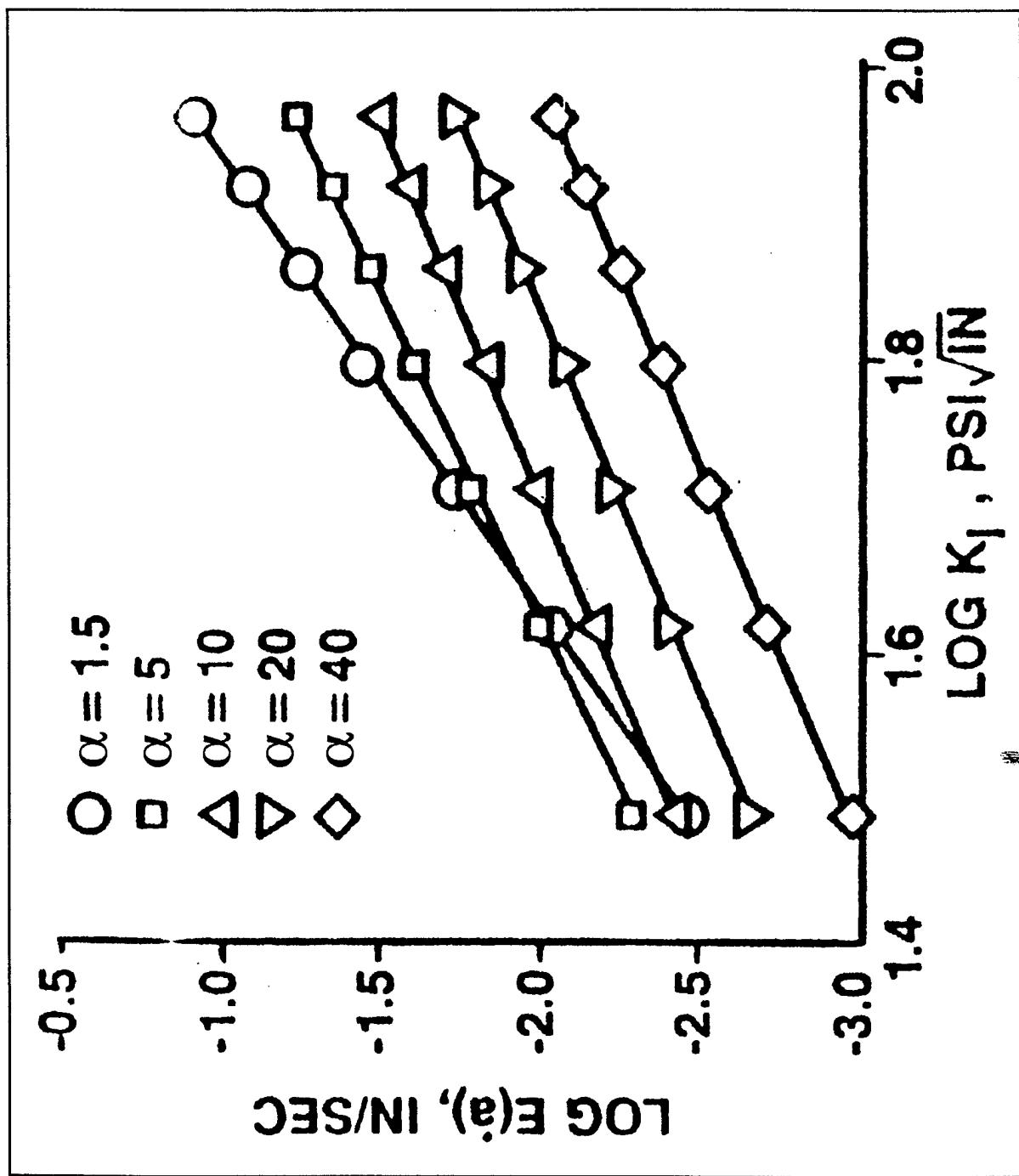


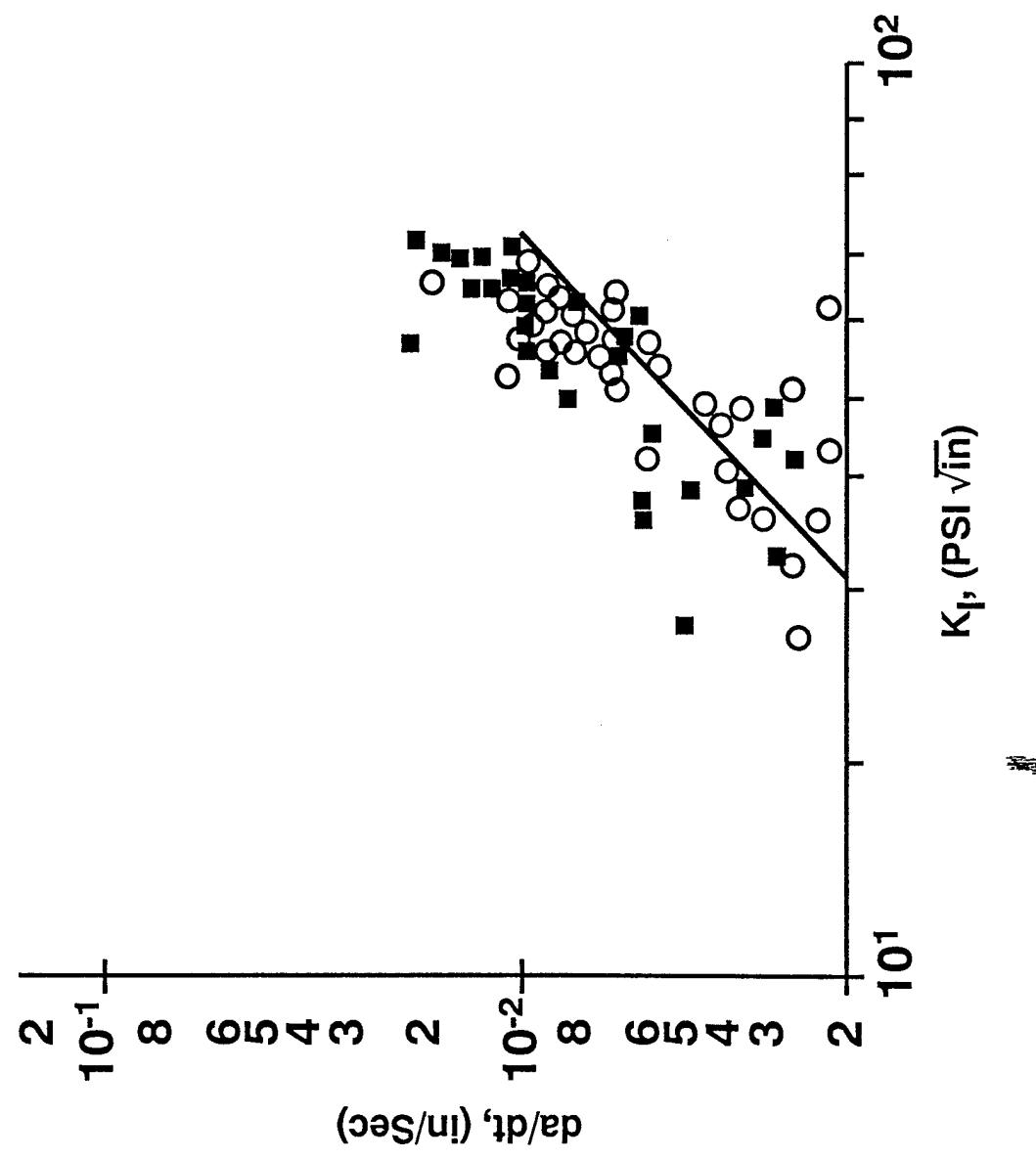


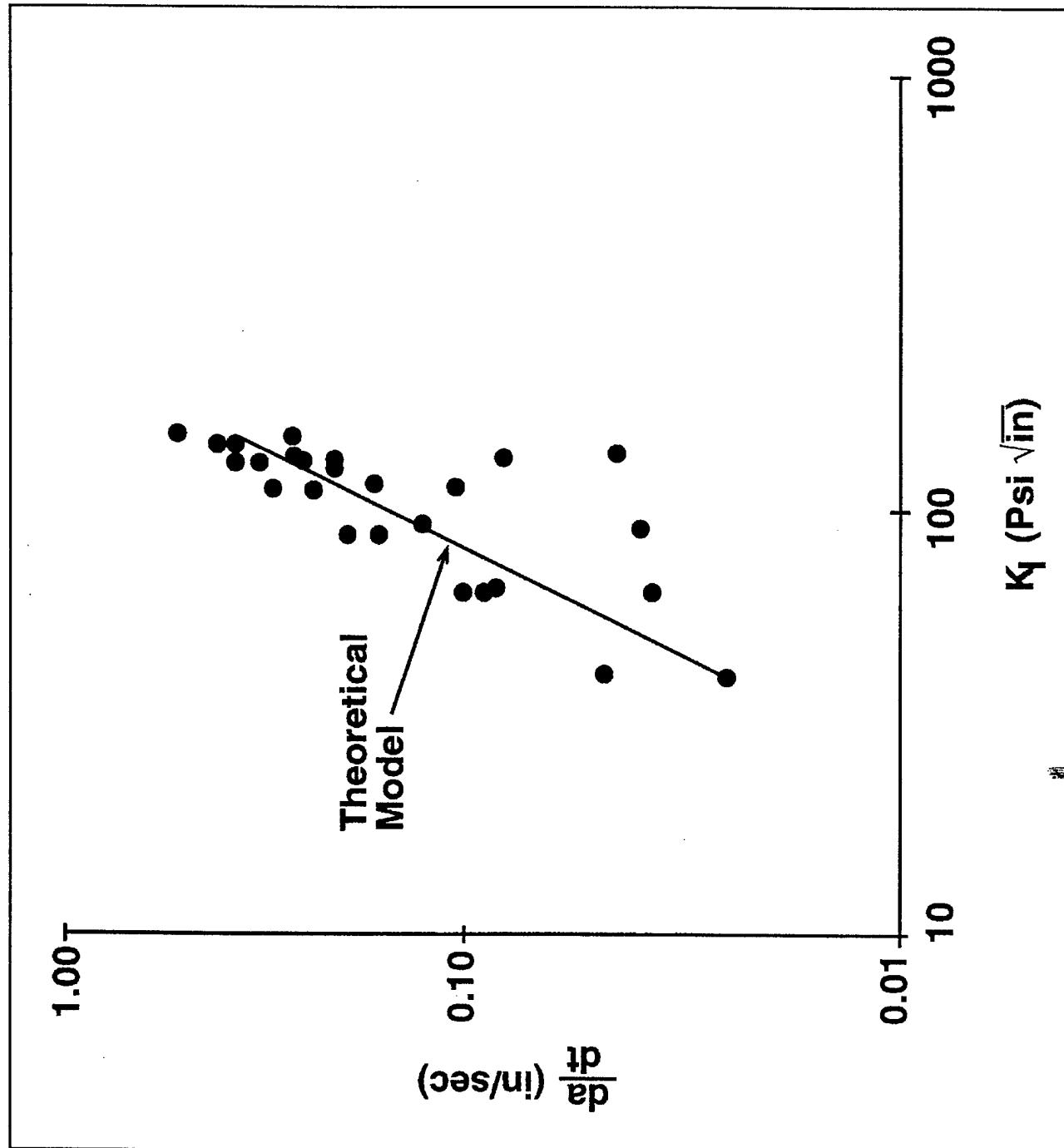












## **Conclusions**

- 1. The Crack Growth Model can be Used to Predict Crack growth Rate at Different Strain Rates with Good Accuracy.**
- 2. Among the Parameters in the Crack Growth Model, the Characteristic Value of the Strength,  $\beta$ , has the Greatest Effect on the Crack Growth Rate.**